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PATENT COOPERATION TREATY

PCT

REC'D 29 JUN 2004

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

PCT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 590045C	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/AU2003/001106	International Filing Date (day/month/year) 28 August 2003	Priority Date (day/month/year) 19 September 2002
International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ E03C 1/22, E03C 1/20, E03C 1/182, E03C 1/14		
Applicant CAROMA INDUSTRIES LIMITED et al		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 4 sheet(s).

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 3 March 2004	Date of completion of the report 17 June 2004
Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer C. NGUYEN-KIM Telephone No. (02) 6283 2121

I. Basis of the report**1. With regard to the elements of the international application:***

- ☐ the international application as originally filed.
- ☒ the description, pages 3 – 4, as originally filed,
pages , filed with the demand,
pages 1 – 2, received on 18 May 2004 with the letter of 17 May 2004
- ☒ the claims, pages , as originally filed,
pages , as amended (together with any statement) under Article 19,
pages , filed with the demand,
pages 5 – 6, received on 18 May 2004 with the letter of 17 May 2004
- ☒ the drawings, pages 1 – 5, as originally filed,
pages , filed with the demand,
pages , received on with the letter of
- ☐ the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1 – 9	YES
	Claims	NO
Inventive step (IS)	Claims 1 – 9	YES
	Claims	NO
Industrial applicability (IA)	Claims 1 – 9	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)

The following international search report citations have been considered for the purpose of this statement:

D1: AU 52071/98 B (721387)

D2: AU 71014/87 B (593341)

D3: AU 81164/87 B (595954)

Novelty (N) Claims 1 – 9

The claims are novel in the light of D1 – D3 none of which discloses the outlet member (of smaller diameter) having at least one radial opening in the second threaded end.

Inventive step (IS) Claims 1 – 9

The claims involve an inventive step for the same reason above.

Industrial applicability (IA) Claims 1 – 9

The claims satisfy the requirements for industrial applicability. .

AN OUTLET ARRANGEMENT

Technical Field

The present invention relates to an outlet arrangement for adapting a water receptacle having a smaller diameter outlet for use with a larger diameter waste outlet and trap.

The invention has been primarily developed to adapt sinks or hand basins produced with outlet openings suited for 32 mm diameter waste outlet components for use with 40 mm diameter traps and will be described hereinafter with reference to this application. However, it will be appreciated that the invention is not limited to these particular use and is equally suited for relatively smaller and larger diameters of various sizes.

Background of the Invention

Water receptacles, such as sinks and hand basins, produced for markets outside of Australia commonly have an outlet opening designed to fit 32 mm waste outlet components. Sinks and hand basins produced for the Australian market have an outlet opening designed to fit 40 mm diameter waste outlet components, which are suitable for connection to the 40 mm diameter traps common in Australian plumbing. Accordingly, adapting 32 mm waste outlet components to 40 mm plumbing requires a 32 mm to 40 mm thread adaptor.

There are two main disadvantages associated with such thread adaptors. The first is that they represent an additional expense to produce, supply and install. The second is they introduce an extra potential leak path between the waste outlet in the sink/basin and the adaptor.

Object of the Invention

It is the object of the present invention to substantially overcome or at least ameliorate one or more of the above prior art disadvantages.

Summary of the Invention

Accordingly, the present invention provides an outlet arrangement for adapting a water receptacle having a smaller diameter outlet for use with a larger diameter waste outlet and trap, the arrangement including:

an outlet member having a first end adapted to seal against an outlet opening of either the smaller or the larger diameter in an inner side of the water receptacle, a second

threaded cylindrical end adapted to fit through an opening of the smaller diameter and at least one radial opening in the second threaded end; and

a locking collar having an internal thread adapted to engage with the second threaded end of the outlet member, and adapted for screwing along the outlet member second threaded end into abutment with an outer side of the water receptacle, and an external thread adapted to engage a waste outlet or trap of the larger diameter.

The outlet member first end preferably includes a sealing region adapted to seal against a waste outlet opening of either the smaller or the larger diameter. The outlet member first end sealing region is preferably in the form of an annular flange.

The collar preferably includes a sealing region adapted to seal against the outer side of the water receptacle adjacent the waste outlet. The collar sealing region is preferably in the form of an external annular flange. The external annular flange preferably has an inner diameter smaller, most preferably only slightly smaller, than the smaller diameter and an outer diameter larger than the larger diameter. The collar sealing region is preferably nearer the opposite end of the collar to that having the external thread.

The outlet arrangement is preferably sized to adapt a sink or basin with an outlet opening suitable for 32 mm diameter outlet components for use with a 40 mm diameter waste outlet and trap.

Brief Description of the Drawings

A preferred embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings in which:

Fig. 1 is an exploded perspective view of a first embodiment of an outlet arrangement according to the invention;

Fig. 2 is a cross sectional side view of the outlet arrangement shown in Fig. 1 installed in a non-overflow basin suited for 40 mm waste outlet components;

Fig. 3 is a cross sectional side view of the outlet arrangement shown in Fig. 1 installed in an overflow basin suited for 32 mm waste outlet components; and

Figs. 4 to 8 are assembled top, perspective, side, front and cross sectional side views respectively of the outlet arrangement shown in Fig. 1.

The claims defining the invention are as follows:

1. An outlet arrangement for adapting a water receptacle having a smaller diameter outlet for use with a larger diameter waste outlet and trap, the arrangement including:

5 an outlet member having a first end adapted to seal against an outlet opening of either the smaller or the larger diameter in an inner side of the water receptacle, a second threaded cylindrical end adapted to fit through an opening of the smaller diameter and at least one radial opening in the second threaded end; and

10 a locking collar having an internal thread adapted to engage with the second threaded end of the outlet member, and adapted for screwing along the outlet member second threaded end into abutment with an outer side of the water receptacle, and an external thread adapted to engage a waste outlet or trap of the larger diameter.

15 2. The arrangement as claimed in claim 1, wherein the outlet member first end includes a sealing region adapted to seal against a waste outlet opening of either the smaller or the larger diameter.

3. The arrangement as claimed in claim 2, wherein the outlet member first end sealing region is in the form of an annular flange.

20 4. The arrangement as claimed in any one of the preceding claims, wherein the collar includes a sealing region adapted to seal against the outer side of the water receptacle adjacent the waste outlet.

5. The arrangement as claimed in claim 4, wherein the collar sealing region is in the form of an external annular flange.

25 6. The arrangement as claimed in claim 5, wherein the external annular flange has an inner diameter smaller than the smaller diameter and an outer diameter larger than the larger diameter.

7. The arrangement as claimed in claim 6, wherein the external annular flange has an inner diameter only slightly smaller than the smaller diameter and an outer diameter larger than the larger diameter.

30 8. The arrangement as claimed in any one of claims 4 to 7, wherein the collar sealing region is nearer the opposite end of the collar to that having the external thread.

9. The arrangement as claimed in any one of the preceding claims, wherein the outlet arrangement is sized to adapt a sink or basin with an outlet opening suitable for

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use with 32 mm diameter waste outlet components for use with 40 mm diameter waste outlets or traps.

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